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University Attainment of the Registered Indian Population, 1981–2006: A Cohort Approach

John Clement

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Introduction

The trends in university attainment for the Registered Indian population from 1981 to 2006 are presented in the article below. Given our understanding that the Registered Indian population generally has the poorest educational outcomes of all of the Aboriginal groups in Canada, we are particularly interested in seeing if efforts to encourage post-secondary studies are bearing fruit. We chose a cohort approach to the analysis in which age cohorts are treated as birth cohorts and tracked through time to examine trends in the educational attainment of the Registered Indian population in Canada with appropriate comparisons to the same progress made by other Canadians. Finally, both cross-sectional and cohort approaches are employed to quantify the gap or differential in university degree attainment between Registered Indians and other Canadians. This allows us to assess the policy implications of the current situation.*

Background

It is well documented that educational and labour market outcomes for Aboriginal people in Canada lag behind those of non-Aboriginal Canadians (Hull 2005, Mendelson 2006). In terms of educational attainment, Aboriginal peoples have experienced some progress in increasing their levels of high school and post-secondary completions in the last decade (Maxim and White 2005). Additionally, it has been shown that those Aboriginal people who complete their university degrees enjoy similar labour market outcomes as their non-Aboriginal counterparts, with improved unemployment rates and higher levels of employment income, which all contributes to an improved economic well-being. Unfortunately, these educational improvements for Aboriginal Canadians have not kept pace with the increasing educational attainment experienced by non-Aboriginal Canadians. In particular, relatively few Aboriginal Canadians have completed university degrees, which is quite contrary to the situation for non-Aboriginal Canadians.

* This introduction was written by the editors.

This situation is of particular importance given Canada's, and other OECD countries', increasing concern over the educational outcomes of children and youth. Education policy goals articulated by Canada and other organizations have been to encourage youth to attend university and higher education programs in greater numbers than in the past in order to engage and reap benefits in an increasingly competitive and global knowledge-based economy. So far, the populace has taken note of this policy push with recently published data describing the increasing numbers of individuals enrolling in university programs at Canadian universities (Statistics Canada, 2005). However, this policy shift has the potential to be a double-edged sword. Some researchers have stated that this drive to pursue post-secondary credentials is out of sync with the realities of the labour force (Côté and Allahar 2007). Unreasonably high education credentials may be needed for entry-level or junior white collar positions simply because employers can now demand it. But a more insidious effect of this change could be its ability to further disadvantage those individuals who choose not to pursue post-secondary education or those groups who have experienced less success in the Canadian educational system.

One of these groups is Aboriginal Canadians, who face considerably more social and economic barriers to educational success than other Canadians due to their lower socio-economic status. Research indicates that educational outcomes are highly correlated with social economic status where one finds higher educational success for children in families with higher levels of education and income (Goran, Fitz, and Taylor 2001). Additionally, precursors such as health status and emotional and behavioural disorders have been shown to be related to social economic status where both adults and children of lower socio-economic levels suffer poorer health and are more likely to experience emotional and behavioural distress than families in higher social and income levels (Brownell, Roos, and Fransoo 2006). Unfortunately, Aboriginal Canadians also suffer poorer rates of health and lower life expectancy than non-Aboriginal Canadians.

The interaction between the Canadian educational system and Aboriginal Canadians in the past has not been a positive one. Historically, the residential school system, formerly a part of the federal governments' assimilationist education policy, has left Aboriginal people a legacy of mistrust and alienation for pursuing higher education, particularly at the post-secondary level (Canada Millennium Scholarship Foundation 2004). Despite these various points, researchers and educators have not remained silent on suggesting measures to improve the academic success and persistence towards higher education for Aboriginal peoples. Some researchers have gone as far as to ask the question "how much do schools contribute to the problem?" and suggest more cultural and mutually accommodating environments in which schools and universities can respect and acknowledge Aboriginal cultures, languages, traditions and contributions made to Canadian society (Kirkness and Barnhardt 1991, MacKay and Myles 1995). However, at the same time, there has been very little empirical evidence linking

Aboriginal cultural and language accommodation to an improvement in academic achievement and other educational outcomes such as retention and persistence.[1]

All of this said, this article has several objectives. First, the cross-sectional trends in university attainment of the Registered Indian population are examined from 1981 to 2006. Registered Indians are a sub-group within the Aboriginal population defined by the *Indian Act* (1985) and generally have the poorest educational outcomes of all of the Aboriginal groups in Canada. Second, a cohort approach in which age cohorts are treated as birth cohorts and tracked through time is utilized to examine trends in educational attainment of the Registered Indian population in Canada with appropriate comparisons to the same progress made by other Canadians. Finally, both cross-sectional and cohort approaches are employed to quantify the gap or differential in university degree attainment between Registered Indians and other Canadians to determine its growth over time.[2]

Before we move to the presentation of results, the following sections outline the data sources, the variables used to identify the Registered Indian population, and their limitations for tracking and measuring university educational progress.

Sources of Data on Aboriginal Educational Outcomes

Overall, a reliable and consistent data source to compare and track progress of educational attainment of various ethnic groups is the Census of Canada. The Census contains detailed questions on the highest level of education attained by individuals, which remained essentially unchanged until the 2006 Census of Canada was undertaken.[3] These same questions also recorded whether an individual attended a post-secondary educational program even if a degree or diploma was never achieved. This is no longer the case for any Census conducted from 2006 and onward. Only actual educational credentials obtained, such as high school certificates and post-secondary degrees and diplomas, are to be recorded. No longer will any educational attainment below a high school certificate be recorded nor will any studies which did not result in the completion of a post-secondary degree or diploma. One serious implication of this new accounting method for the highest level of schooling is the continuity of current educational indicators over time and also their comparability before and after the 2006 Census. In some cases, these Census changes have rendered some educational indicators invalid, such as university participation and completion rates, which rely on the numbers of all individuals who attended university regardless if they completed their degree. In other cases, new and more refined data will result from the new Census educational questions such as further details on trades and community college degrees. For the purposes of this article, the impact of this change on the university attainment counts of Registered Indians is minimal as will be discussed at length in the next section.

The Census is not without its inherent limitations (Census Technical Report 2001). The Census does not collect at any qualitative depth data that may explain the associated reasons or factors for emerging trends or gaps in educational attainment amongst various ethnic groups. However, some post-censal surveys and qualitative studies are attempting to fill this policy research gap, at least for the non-Aboriginal population of Canada. For example, the 2000 Youth in Transition Survey (YITS) gathers longitudinal data on school to work transitions of two Canadian youth cohorts, one aged 15 years and the other aged 18 to 20 years. Although Aboriginal youth were included in the overall sample of this survey, the sample was too small to distinguish between Registered Indians and other Aboriginal Canadians and thus not representative of the total Registered Indian youth population in Canada.[4] Although a representative sample of Aboriginal Canadians in YITS is seen as desirable to support evidenced-based policy development in educational matters, other YITS-like qualitative studies are occurring with Indian reserves across Canada that attempt to describe the factors that support or diminish the post-secondary pursuits of their members.[5] Findings from these case studies can provide the evidence base required to create community-specific policy to maximize potential for educational and labour market outcomes.

Another source of data on Aboriginal educational outcomes comes from the federal program which serves to provide funding for qualified Aboriginal Canadians to pursue post-secondary education. The Post-Secondary Student Support Program (PSSSP), administered by Indian and Northern Affairs Canada (INAC) provides funding to Registered Indians and Inuit to pursue post-secondary education. The objective of the program is to support the increased participation and success of Registered Indian and Inuit students in recognized post-secondary programs thus affecting their employment prospects upon graduating (Vermaeten, Norris, and Buchmeier 2004). In 2002, INAC provided $285 million to support the educational pursuits of those who qualify. This funding is transferred to Indian bands and reserves across Canada who manage and set priorities for student funding within their jurisdiction. However, not all who apply receive funding from the PSSSP. Furthermore, program data collected from Registered Indian students funded through PSSSP only records a completion event when students graduate from their program of study and not for any other circumstances such as dropping out, moving out of province, or death. Therefore, tracking educational outcomes of these students is restricted to those who receive funding, with limited or no knowledge of outcomes when a student ceases to receive funding from the program. In fact, the Auditor General of Canada (Report, Chapter 5, 2004) has described the program data from the PSSSP as a "data challenge" in which there are difficulties in reporting success and outcomes from the funding program other than at the most basic level.

A Cohort Approach to Measuring Educational Progress

Despite changes in the Census educational variables and the limitations of INAC program data to track post-secondary progress, it is still feasible to examine the overall educational progress for Registered Indians using Census data and a cohort approach (Hull 2006). In terms of definitions, Registered Indians are those individuals entitled under the *Indian Act* to be registered as an Indian and thus to receive benefits and rights as outlined under the Act (*Indian Act*, 1985). Likewise, a cohort is defined as a group of individuals who share common characteristics (Glenn 2005). For this analysis, these common characteristics are that individuals are Registered Indians by birth and share a common age category. For the population not entitled to be Registered Indians, they are referred to in this analysis as the non-Registered Indian or other Canadian population and compromise the comparative population group.[6]

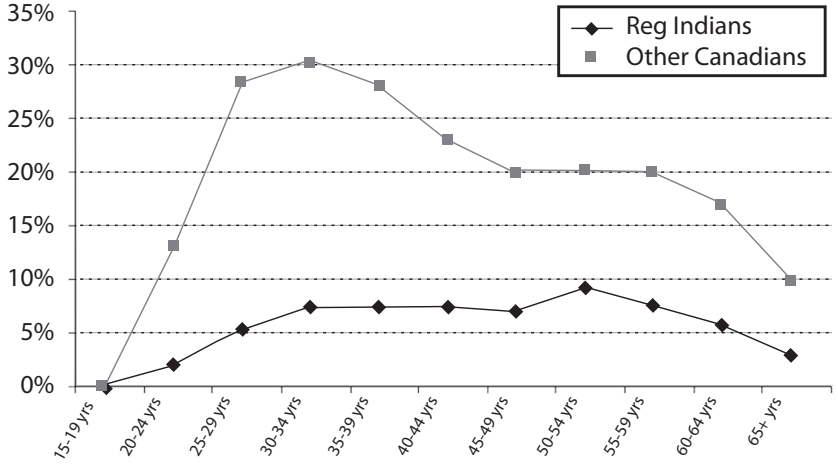
Between 1981 and 2006, the Census of Canada is capable of distinguishing various social and economic characteristics between the Registered Indian and other Canadian populations. Additionally in this twenty-five year period, the Census education question on the completion of a university degree has remained unchanged and comparable to previous Census periods. The stability in both of these Census variables over time allows the possibility to examine the university educational progress between the Registered and other Canadian populations for all age categories or by following specific age cohorts through several Census periods.[7]

Census Data Limitations for the Registered Indian Population

Since our focus on university educational progress is restricted to the Registered Indian population, it is first worthwhile to discuss some of the limitations associated with the Census data for this Aboriginal group.

According to the 2006 Census, just less than half of Registered Indians reside on-reserve (48%) with the majority (52%) residing off-reserve in either rural or urban areas of Canada. Not all reserves participate in the Census, particularly some larger ones located in the provinces of Ontario and Quebec (Census Technical Report 2001). The number of non-participating reserves has varied over Census periods and is documented in the Census technical literature. A consequence of what is described as "incomplete enumeration" is that the educational attributes of any non-participating Registered Indian population are not included in the overall Census counts or in any other analysis using this data. Additionally, there was no attempt at this time to control for this variation of Census non-participating reserves. Minimally, one method would be to include only a core number of

Figure 5.1: Proportion of Registered Indians and Other Canadians with a University Degree, 2006

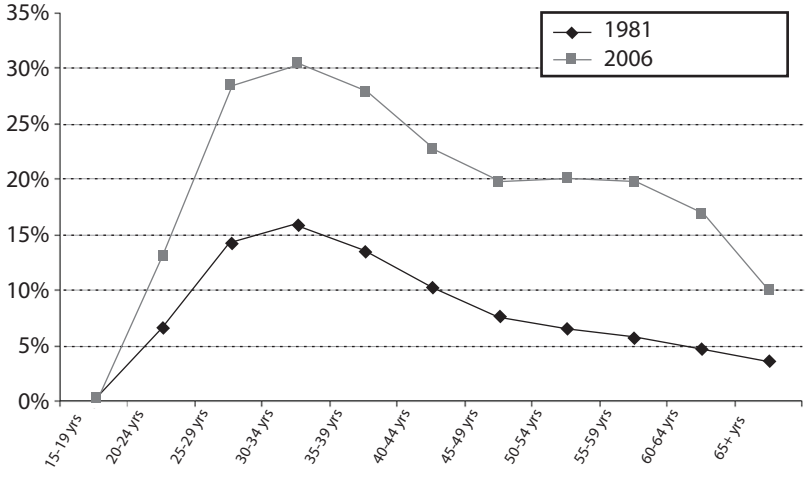


reserves that participated in all Censuses from 1981 to 2006 but at the exclusion of education data for those that participated intermittently within this period.[8]

A legislative event that has affected the overall Registered Indian population over time was the enactment of Bill C-31 in 1985. Bill C-31 removed the paternalistic tendencies of the previous *Indian Act*, allowing for the reinstatement of Registered Indian status to those who lost status previously and allowing for the registration of Indian status to their children. The population most affected by this legislative change were Registered Indian women who lost their Indian status through marriage to non-Staus men. Subsequently, one would expect to find a sharp increase in the Registered Indian population, particularly in the 1991 Census, which is the case. Basic departmental data (BDD) collected by INAC on reinstatements resulting from Bill C-31 reveal that the two years subsequent to 1985 experienced a quadrupling of the regular year-over-year increase in the Registered Indian population. The year over year increase in the Registered Indian population has since returned to similar levels prior to 1985 (INAC 2002) around 2 to 4% a year.

One issue that comes to mind as a consequence of Bill C-31 is the impact of this reinstated population on the overall educational attainment of the Registered Indian population? This is not a trivial question; the Census does not contain any variables to separate out the Bill C-31 sub-population from those who had Status prior to 1985. However, the Aboriginal Peoples Survey (APS) conducted in 1991 did include several questions to determine if respondents regained their Indian status through Bill C-31, but only on a one time basis. Preliminary analysis using the 1991 APS Public Use Microdata File (PUMF) shows that the educational characteristics of the Bill C-31 population is not that much different from that of

Figure 5.2: Proportion of Other Canadians with a University Degree by Age Category, 1981 and 2006



the Registered Indian population who had status prior to Bill C-31, particularly for university degree completions.[9]

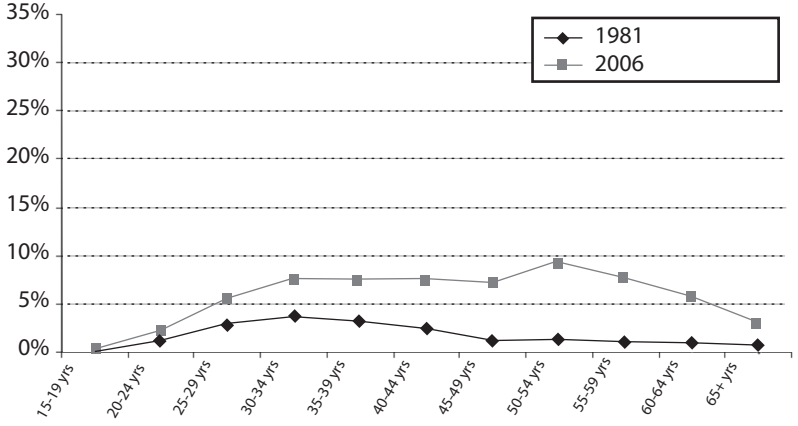
Overall University Attainment of Registered Indian and Other Canadian Populations in 2006

The proportions of university degree attainment by age group of Registered Indians and other Canadians in Canada using 2006 Census data are shown in **Figure 5.1**. As discussed previously, all analysis presented is based on comparing university degree completions in previous Census periods from 1981 to 2006, which are comparable to the new definition of the highest degree, certificate or diploma (HCDC) variable used in the 2006 Census, where only data on actual obtained university degrees at the Bachelor's level and higher are counted.[10]

Age groups are organized in five year intervals for the Registered Indian and other Canadian populations aged 15 years and older starting with those aged 15 to 19, 20 to 24 and so on until the last age category of 65 years and older (65+ yrs). No analysis is provided for any age groups older than 65 years, since the likelihood of individuals in this group increasing their university attainment is greatly reduced due to increased mortality.

In 2006, the Registered Indian population had much lower overall university degree attainment (5%) than the other Canadian population (18%). For certain age groups, the proportion of the other Canadian population with a university degree is almost six times that for the Registered Indian population (20–24 and 25–29 years old). One point of interest is the age groups in which both populations possess the highest proportion with a university degree. For the Registered Indian population,

Figure 5.3: Proportion of Registered Indians with a University Degree by Age Category, 1981 and 2006



older age cohorts (30–34 to 50–55 years old) appear to possess slightly higher proportions with a university degree than younger ones. In contrast, young other Canadian cohorts possess higher proportions with a university degree.

University Attainment of the Registered Indian and Other Canadian Populations in 1981 and 2006

The Census data allow for the examination of university educational trends for both the Registered Indian and other Canadian populations in 1981 and twenty-five years later in 2006.

Figure 5.2 depicts the proportions in the other Canadian population with a university degree for the Census periods of 1981 and 2006. In 1981, 8% of the other Canadian population had a university degree, more than doubling to 18% in 2006. For both Census periods, it is the younger age groups which have the highest proportions with a university degree, with the 30–34 year olds having the highest proportion in 1981 (16%) and again in 2006 (30%). Clearly, there has been noticeable progress in the attainment of university degrees for all age groups in this twenty-five year period, except for the very young (15–19 years old). This would be reasonable given that university graduates are likely to be over 19 years old and most in this age group were still attending high school.

Figure 5.3 depicts the age group proportions with a university degree for the Registered Indian population in the Census periods of 1981 and 2006. Although university attainment for all age categories is nowhere near as pronounced as it is for the other Canadian population, some progress has been achieved over the twenty-five year period. Overall in 1981, only 2% of the Registered Indian population had a university degree, increasing to 5% in 2006. In 1981, the younger age groups exhibited the highest proportions of individuals who obtained a university

Figure 5.4: Proportion of Other Canadian Males with a University Degree by Age Category, 1981 and 2006

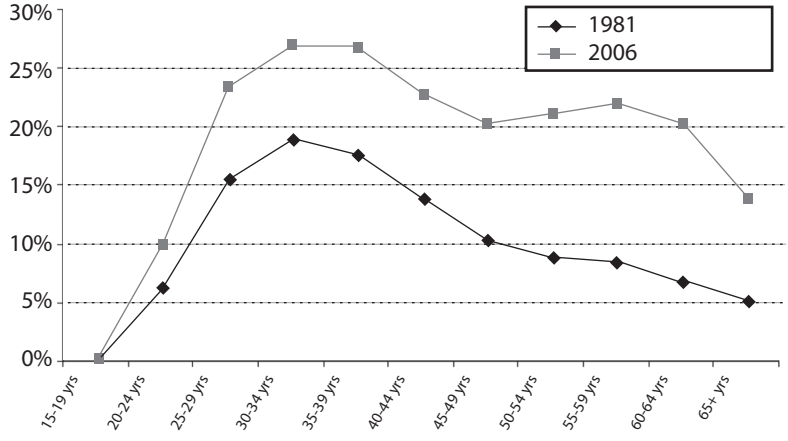
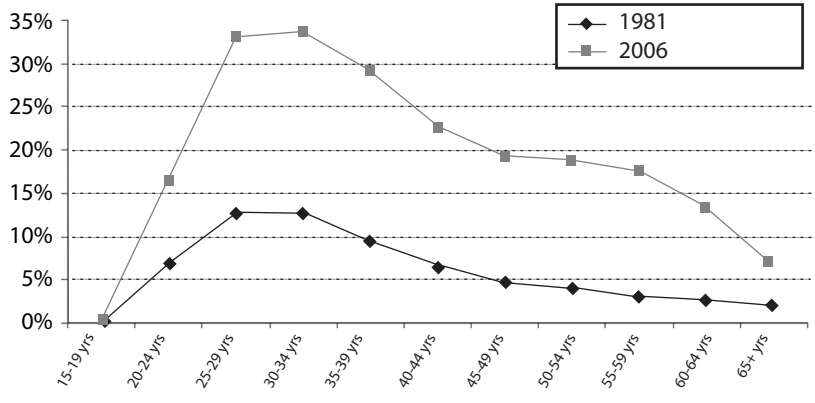
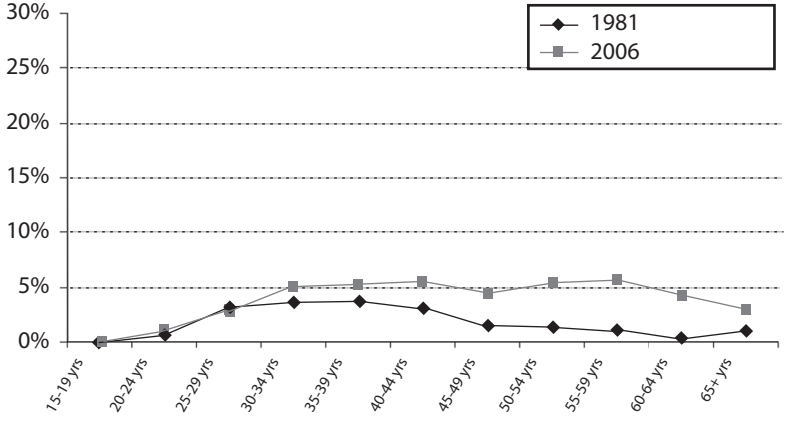


Figure 5.5: Proportion of Other Canadian Females with a University Degree by Age Category, 1981 and 2006



degree, although the proportions are quite small, with the highest being around 4%. However in 2006, it is the older age groups (30–34 to 55–59 years old) that have the highest proportion of individuals who have obtained their university degree. This trend, unlike that of the other Canadian population, has been noted by other researchers (Hull 2006) where it has been observed that those Aboriginal individuals who go on to complete their post-secondary educational pursuits do so at an older age than other Canadians. To date, no additional quantitative or qualitative research has been performed to explain this phenomenon to any level of detail.

Figure 5.6: Proportion of Registered Indian Males with a University Degree by Age Category, 1981 and 2006



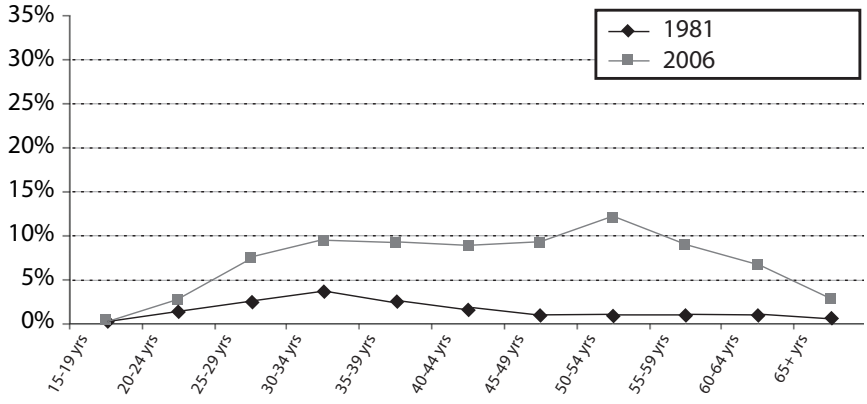
University Attainment of the Registered Indian and Other Canadian Population by Gender between 1981 and 2006

The Census also allows for the examination and comparison of educational trends in the Registered Indian and other Canadian populations from a gender perspective. **Figures 5.4** and **5.5** depict the proportions with a university degree by age groups in 1981 and 2006 for the other Canadian male and female populations respectively.

In 1981, 10% of the other Canadian male population obtained a university degree, increasing to 18% in 2006. The other Canadian male population showed progress in the proportions obtaining their university degrees in almost all age categories over the twenty-five year period. In 1981, young male other Canadian age groups of 25 to 29, 30 to 34 and 35 to 39 year olds had the highest proportions with a university degree compared to older ones. These same young male age groups, plus the middle aged group of 40 to 44 year olds, have the highest proportions with a university degree in 2006, where even higher proportions are achieved.

In 1981, 6% of the other Canadian female population obtained a university degree, tripling to 18% in 2006. The other Canadian female population experienced significant progress in obtaining their university credentials between 1981 and 2006. In 1981, young female age groups of 25 to 29 and 30 to 34 years old had the highest proportions with a university degree. In 2006, these same young female age groups had the highest proportions with a university degree (25–29 and 30–34 years old), with the distinction of having the highest proportions of any age group presented in this analysis. This supports other observations that females have been attending and completing their university studies in higher

Figure 5.7: Proportion of Registered Indian Females with a University Degree by Age Category, 1981 and 2006



numbers than their male counterparts in the last decade or so (Statistics Canada, 2005). Other recent research has linked the gender imbalance of university attendance between males and females to the higher returns from university education obtained by females than males (Christofides, Hoy, Yang 2006).[11]

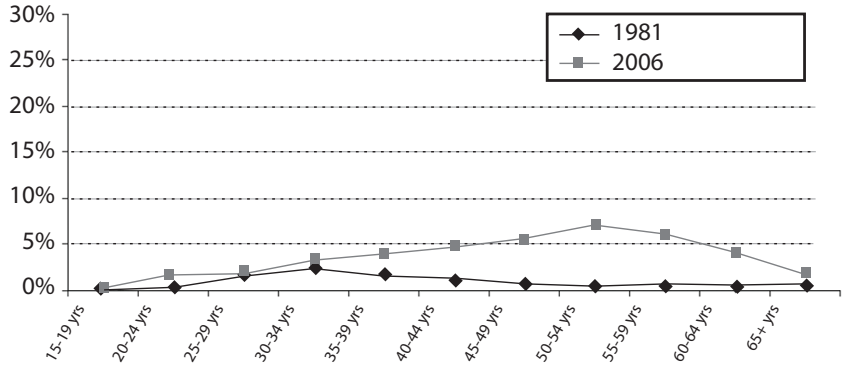
Figures 5.6 and **5.7** depict the proportions by age groups of university degree attainment in 1981 and 2006 for the Registered Indian male and female populations respectively.

Both the Registered Indian male and female populations have much smaller proportions with a university degree, overall and by age category, than their other Canadian counterparts.

In 1981, 2% of the Registered Indian male population had a university degree increasing only slightly to 4% in 2006. For Registered Indian males in age categories younger than 40 to 44 years, very little progress was made in obtaining higher proportions with university degrees between 1981 and 2006. In 1981, the younger Registered Indian male age groups had higher attainment than older cohorts. In 2006, this trend was no longer the case, with a mix of young and older male age groups (30–34 to 55–59 year olds) having the highest proportions with a university degree compared to younger ones.

Similarly, in 1981, only 1% of the Registered Indian female population had a university degree. By 2006 this had increased to 7%. Except for the youngest and oldest Registered Indian female age groups, there has been some noticeable progress for most age groups, albeit small, over the twenty-five year period between 1981 and 2006. In 1981, the highest proportions with a university degree were amongst the younger Registered Indian female age groups (35–39 years and younger). However, by 2006 older Registered Indian female age groups (40–44, to 55–59 years old) also had high relative proportions with a university degree in 2006.

Figure 5.8: Proportion of Registered Indians On-reserve with a University Degree by Age Category, 1981 and 2006



Registered Indian females exceeded the university attainment progress of their male counterparts in 2006 for all age categories. The largest gap in university degree completions between Registered Indian females and males were for 40 to 44 and 50 to 54 year olds where females in both of these age categories had between 6 to 7% more individuals in their age group populations with a university degree (9% vs. 3% and 12% vs. 5%).

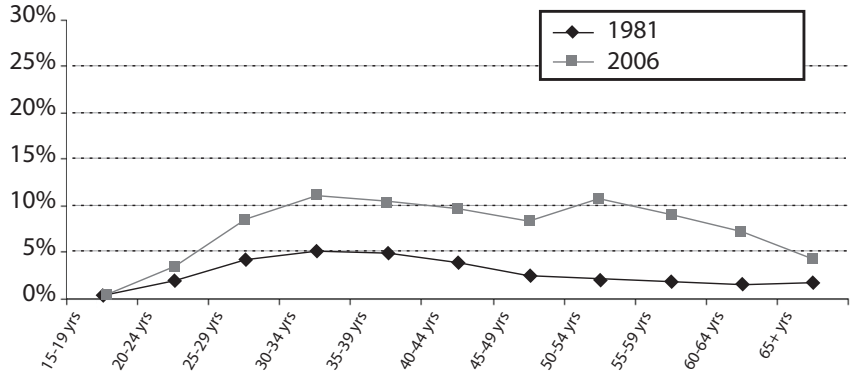
University Attainment of Registered Indians Residing On- and Off-reserves in 1981 and 2006

In 2006, as mentioned previously, Registered Indians were slightly more likely to live in off-reserve locations. **Figures 5.8** and **5.9** depict the proportions by age category of university attainment for Registered Indians residing on and off-reserve.

For Registered Indians residing on-reserve in 1981, overall very few obtained a university degree (1%), increasing only slightly to 3% in 2006. Those with a university degree in 1981 were primarily in the younger age categories of 25 to 29, 30 to 34, and 35 to 39 years old, compromising about 2% of the total population in these age groups at the time. In 2006, the slight progress in university attainment is most evident in the older age categories of 45 to 49, 50 to 54, and 55 to 59 years old, at around 6% of the total population in these age groups.

Registered Indians residing in off-reserve locations fared slightly better than their on-reserve counterparts in obtaining a university degree in the same time periods. In 1981, 2% of Registered Indians residing in off-reserve locations had a university degree, increasing modestly to around 7% in 2006. In 1981, Registered Indian residing in off-reserve locations in the age groups of 25 to 29 years old to 40 to 44 years old had the highest attainment of university degrees at between 4 to 5%. In 2006, the age groups of Registered Indians residing in off-reserve locations with the highest proportions of university degree attainment was a mix

Figure 5.9: Proportion of Registered Indians Off-reserve with a University Degree by Age Category, 1981 and 2006



of young (30–34, 35–39 and 40–44 years old) and older age groups (50–54 and 55–59 years old).

Registered Indians residing in off-reserve locations exceeded the university attainment progress of their on-reserve counterparts in 2006 for all age categories except 15 to 19 year olds. The largest gap in progress between off-reserve and on-reserve Registered Indians by age category was for 20 to 25, 30 to 34 and 35 to 39 year olds. Off-reserve Registered Indians in these age categories had between 6 to 8% more individuals with a university degree than those Registered Indians residing on-reserve (8% vs. 2%, 11% vs 3% and 10% vs. 4%).[12]

University Attainment of Registered Indians Residing On- and Off-reserve by Gender in 1981 and 2006

Figures 5.10 and **5.11** depict the university attainment of Registered Indians residing on-reserve by gender in 1981 and 2006.

For Registered Indian males residing on-reserve in 1981, relatively few (less than 1%) had obtained a university degree. Of those that did, the age groups with the highest proportions were 25 to 29 to 40 to 44 years old, at around 2% respectively. In 2006, Registered Indian males experienced only a very slight improvement in their attainment of university degrees (to 1.8% of the population). The age groups with the highest proportions with a university degree were much older than in 1981 (45–49, 50–54 and 55–59 year olds) at around 3–4% of the cohorts, respectively.

Similarly, for Registered Indian females residing on-reserve, relatively few (1%) had obtained a university degree according to the 1981 Census. Of those that had obtained their degrees, the age groups with the highest proportions were 30 to 34 and 35 to 39 year olds with around 2% respectively. In 2006, Registered Indian

Figure 5.10: Proportion of Registered Indian Males Residing On-reserve with a University Degree by Age Category, 1981 and 2006

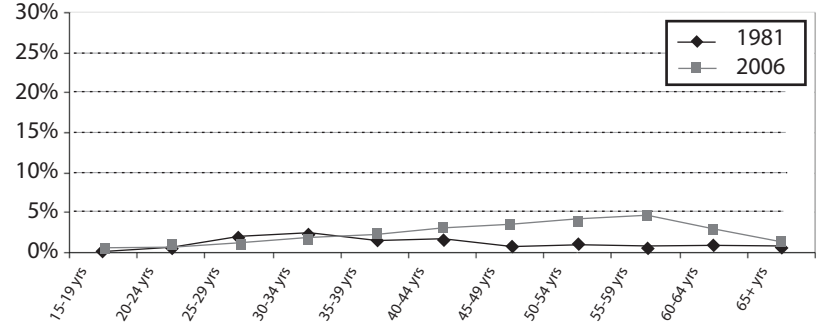
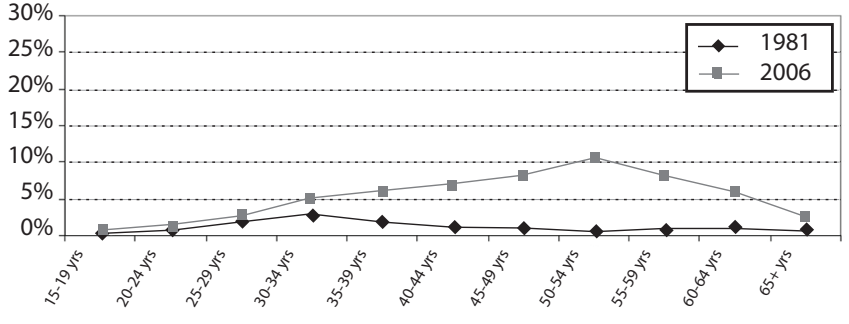


Figure 5.11: Proportion of Registered Indian Females Residing On-reserve with a University Degree by Age Category, 1981 and 2006



females residing on-reserve had experienced a slight but noticeable improvement in their attainment of university degrees (4%). In 2006, the age groups with the highest proportions with a university degree were older, comprised of 45 to 49 (8%), 50 to 54 (10%) and 55 to 59 (8%) year olds.

The higher educational attainment of Registered Indian females residing on-reserve, in comparison to their male counterparts, has been documented by other researchers (Hull 2006). Although the university attainment of Registered Indians in 1981, regardless of gender, was relatively low, there are some differences in 2006. Registered Indian females residing on-reserve in 2006 appear to be more successful than males in obtaining a university degree. Similarly, the data also seems to support that the Registered Indian population over the twenty-five year period have obtained their university degrees at an older age compared to other Canadians, which is a trend also observed by other researchers.

Figures 5.12 and **5.13** depict the university attainment of Registered Indians residing off-reserve, by gender, in other rural and urban areas in 1981 and 2006.

For Registered Indian males residing off-reserve in 1981, 3% of this population had a university degree, increasing slightly to 5% in 2006. In 1981, the propor-

Figure 5.12: Proportion of Registered Indian Males Residing Off-reserve with a University Degree by Age Category, 1981 and 2006

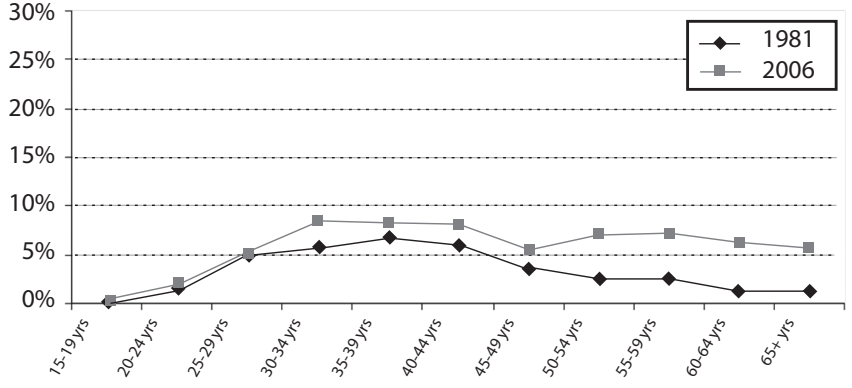
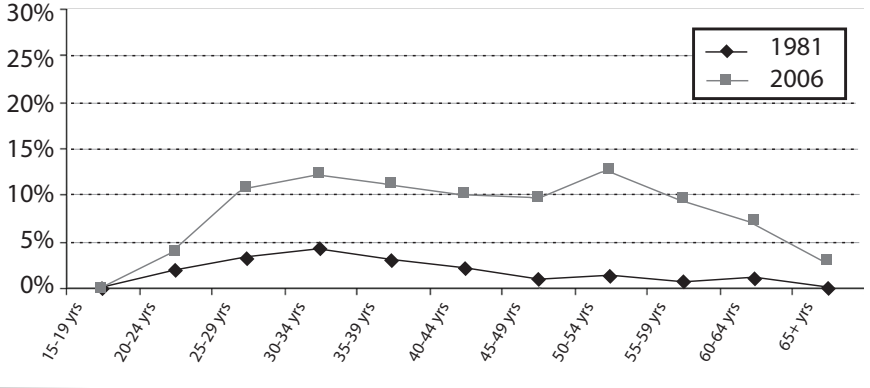


Figure 5.13: Proportion of Registered Indian Females Residing Off-reserve with a University Degree by Age Category, 1981 and 2006



tions with a university degree are small for all cohorts of Registered Indian males residing off-reserve. The highest proportions were for those aged 35 to 39 (7%) and 40 to 44 (6%) years old. In contrast to the Registered Indian male population residing on-reserve during the same time period, these results are two to three times as large, although in general the proportions are generally small compared to other Canadian males. This result also supports other research that indicates that Registered Indians residing off-reserve experience higher educational attainment than those residing on-reserve.

Twenty-five years later, in 2006, all cohorts of Registered Indian males residing off-reserve, except for the three youngest, underwent slight increases in their proportions with a university degree. However, unlike the situation in 1981, the highest proportions with a university degree was shared amongst younger and older cohorts of 30 to 34 (8%), 35 to 39 (8%), 40 to 44 (8%), 50 to 54 (7%) and 55–59 (7%) year olds.

Similar to Registered Indian females residing on-reserve, very small proportions of Registered Indian females residing off-reserve obtained a university degree in 1981. Of those who did, the highest proportions were amongst the 25 to 29 (3%), 30 to 34 (4%), and 35 to 39 (3%) age groups. Twenty-five years later, in 2006, there was noticeable improvements in the attainment of university degrees amongst Registered Indian females residing off-reserve. The age groups with the highest proportions were shared amongst younger age groups of 25 to 29 (11%), 30 to 34 (12%) and 35 to 39 (11%) and the middle-aged age group of 50 to 54 (13%) which recorded the largest proportion with a university degree for the Registered Indian population in 2006.

Similar to the gender differences in university attainment between Registered Indian males and females who reside on-reserve, Registered Indian females residing at off-reserve locations have been more successful in earning a university degree than their male counterparts, particularly in 2006.

A Cohort Approach to Analysis

Until now, the analysis has been restricted to a cross-sectional glimpse of the Census data in 1981 and 2006, and has examined any trends in the proportion of university attainment by age groups for the two populations in question. Keeping in mind the limitations explained previously, the Census definition of the Registered Indian and other Canadian population, as well as the HLOS and HDCD variable categories for university degrees, has remained relatively stable in all the Census periods from 1981 through to the 2006.[13] Therefore, this variable consistency allows for the tracking of university attainment progress by cohorts in this twenty-five year period.

In a cohort approach to tracking progress in university degree attainment, age groups from the 1981 Census are considered as birth cohorts and are then tracked or "aged" through the five remaining Census periods until the 2006 Census is reached. Cohorts in 1981 that are of particular interest in this exercise are the 15 to 19, 20 to 24, 25 to 29, 30 to 34, 35 to 39 and 40 to 44 years old. When the university attainment proportion is tracked for these six cohorts from 1981 to 2006, these cohorts essentially become 40 to 44 to 65+ year olds, respectively at the end of this period.[14]

Table 5.1 shows the university attainment proportions of the Registered Indian population by age category using Census data from 1981 to 2006. The findings outlined in the previous sections were primarily taken from the first and last columns of this table and others which represent the cross-sectional Census data at a given point of time. By adding data series from other Census periods between 1981 and 2006, is it possible to construct cohort trend lines for university attainment by Census year from 1981 and 2006 for both the Registered Indian and other Canadian populations.

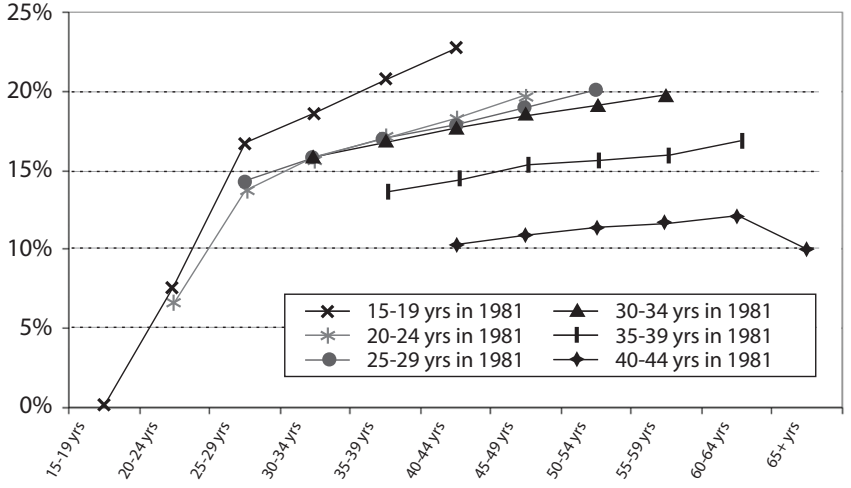
Table 5.1: Proportion of the Registered Indian Population with a University Degree by Age Category, 1981–2006

Age Category	1981	1986	1991	1996	2001	2006
15–19 yrs	**0.0%**	0.0%	0.0%	0.0%	0.0%	0.0%
20–24 yrs	1.0%	**0.6%**	0.9%	1.3%	1.5%	1.9%
25–29 yrs	2.7%	1.9%	**2.2%**	3.1%	4.5%	5.3%
30–34 yrs	3.5%	2.8%	3.0%	**3.7%**	5.6%	7.3%
35–39 yrs	3.0%	3.4%	4.3%	4.9%	**5.3%**	7.2%
40–44 yrs	**2.3%**	2.4%	4.2%	6.1%	5.3%	**7.3%**
45–49 yrs	1.2%	**1.5%**	3.5%	5.7%	7.0%	6.9%
50–54 yrs	1.0%	0.8%	**2.0%**	4.2%	6.6%	9.0%
55–59 yrs	0.9%	0.7%	1.0%	**2.7%**	4.3%	7.5%
60–64 yrs	0.7%	0.5%	1.0%	1.3%	**2.3%**	5.5%
65+ yrs	0.6%	0.2%	0.5%	0.8%	1.3%	**2.8%**

For illustrative purposes, let us focus on the Registered Indian age cohort 15 to 19 years in 1981 to construct its cohort trend line for university attainment from 1981 to 2006. This cohort is the first bolded label in **Table 5.1** under the age category column. The horizontal series of values under the six Census years gives the cross-sectional proportions of the Registered Indian population aged 15 to 19 years who possessed a university degree. It should be noted here that when we look at the university proportions for each age group horizontally, or by rows, through the Census periods, these age groups are not cohorts in the strictest sense but are different individuals in a similar age group but separated in time by a different Census period. However, if instead we follow the diagonal of university attainment proportion values beginning in 1981 through to 2006 for the 15 to 19 year old cohort, represented by the bolded and larger font proportions, this is essentially the same cohort aged over time and followed through the Census periods. By following the 15 to 19 years old Registered Indian cohort, in 1981 in this manner, in 2006 it becomes part of the 40 to 44 year age group in that Census period and is twenty-five years older.

Also highlighted in the age category column of **Table 5.1** is the 1981 Registered Indian 40 to 44 years old cohort. It is important to note that this is the last cohort to be tracked in this analysis since it is the one which ends up precisely at the 65+ year old cohort when aged over twenty-five years. Since dramatic improvements in post-secondary educational attainment are less likely to occur as one ages, it was decided not to track the progress of older age cohorts past 65 years of age but note that it does ends up being a "catch all" cohort for the cohorts 45 to 49 years and older.

Figure 5.14: Proportion of Other Canadians with a University Degree, Selected Cohorts in 1981, Aged to 2006



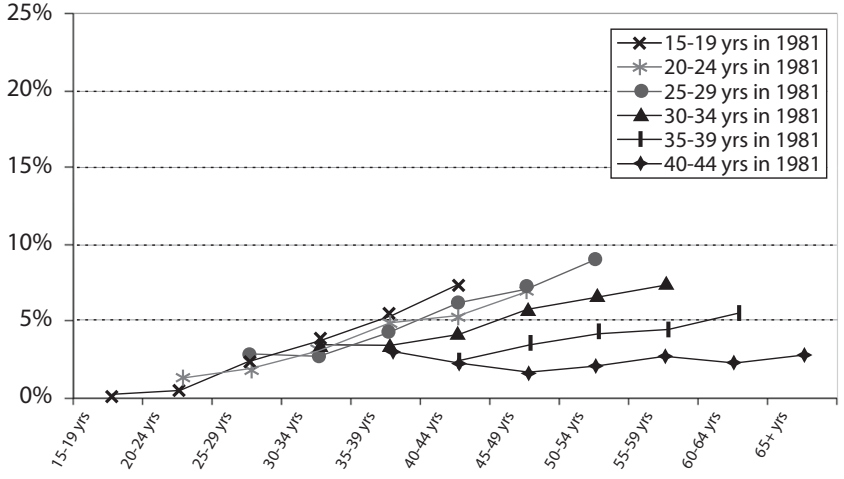
Age Cohort Trends in University Attainment for Other Canadian and Registered Indian Populations from 1981 to 2006

By tracking the progress in university attainment of six cohorts, for both the Registered Indian and other Canadian population, we can examine simultaneously trends within cohorts and amongst themselves as a group over a twenty-five year time frame. However, caution should be exercised when directly comparing the progress of one cohort over another for several reasons. The most obvious is that each of the six cohort trend lines represent individuals in different age ranges who have had varying amounts of time to complete their university degrees. For example, the 15 to 19 year old cohorts almost always show the greatest improvement in university degree completion because, for the most part, they are starting at a zero university completion proportion. Additionally, cohorts that lie between 25 to 44 years of age have a tendency to have the highest post-secondary completion rates because they have had more time to go back and complete their degrees than younger ones (Hull 2005).

Figures 5.14 and **5.15** depict the trends in university degree completion of the six age cohorts in the other Canadian and Registered Indian population through the twenty-five year time period.

For the other Canadian population, all six cohort trend lines—except the oldest—show progress in attainment of university credentials from 1981 to 2006. The youngest cohort of 15 to 19 years old experienced a large increase in the proportion of university attainment going from 0% in 1981 to 23% in 2006 when the cohort becomes 40 to 44 years olds. Slightly older cohorts of 20 to 24, 25 to 29

Figure 5.15: Proportion of Registered Indians with a University Degree, Selected Cohorts in 1981, Aged to 2006



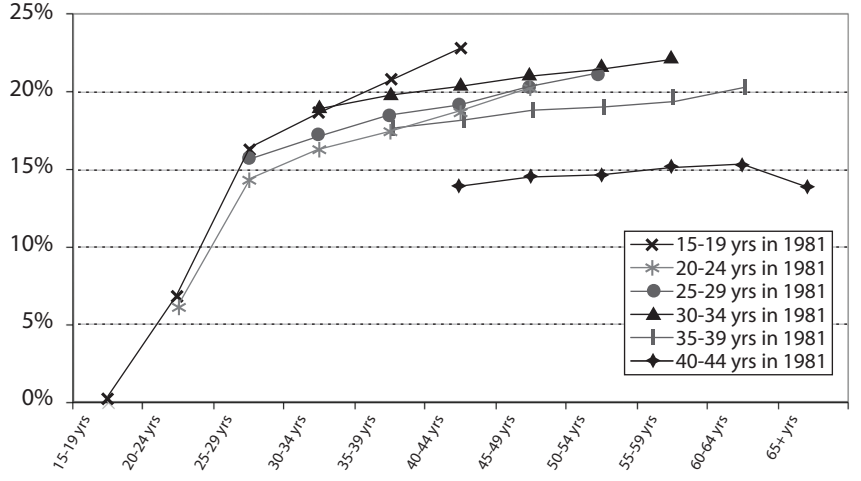
and 30 to 34 years old also experienced noticeable gains in university completion going from 7% to 20%, 14% to 20%, and 16% to 20%, respectively, in the same time period. The older cohort of 40 to 44 years old slightly increased their proportion of university completions from 10% to 12% between 1981 to 2001 but then decreased back to 10% in 2006.

For the Registered Indian population, all cohort trend lines, except for 40 to 44 years old, showed slight progress in university degree completion from 1981 to 2006. The progress of the six Registered Indian cohorts in 1981 was much less than those experienced by their other Canadian counterparts. Similar to other Canadians, the 15 to 19 years old cohort of Registered Indians in 1981 experienced an increase in their proportion with a university degree from 1981 to 2006 going from 0% to 7% in this time period. The slightly older Registered Indian cohorts of 20 to 24, 25 to 29 and 30 to 34 years old also experienced gains in university completion going from 1% to 7%, 3% to 9%, and 3% to 7%, respectively. Older Registered Indian cohorts of 35 to 39 and 40 to 44 years old only experienced marginal or no gains in their proportions in university completions from 1981 to 2006.

Gender Dimensions of Age Cohort Trends in University Attainment of Registered Indians and Other Canadian Populations from 1981 to 2006

Tracking cohort progress in university degree completion amongst the other Canadian and Registered Indian populations by gender is possible using Census data. **Figures 5.16** and **5.17** depict the trends in the proportion of university degree

Figure 5.16: Proportion of Other Canadian Males with a University Degree, Selected Cohorts in 1981 Aged to 2006

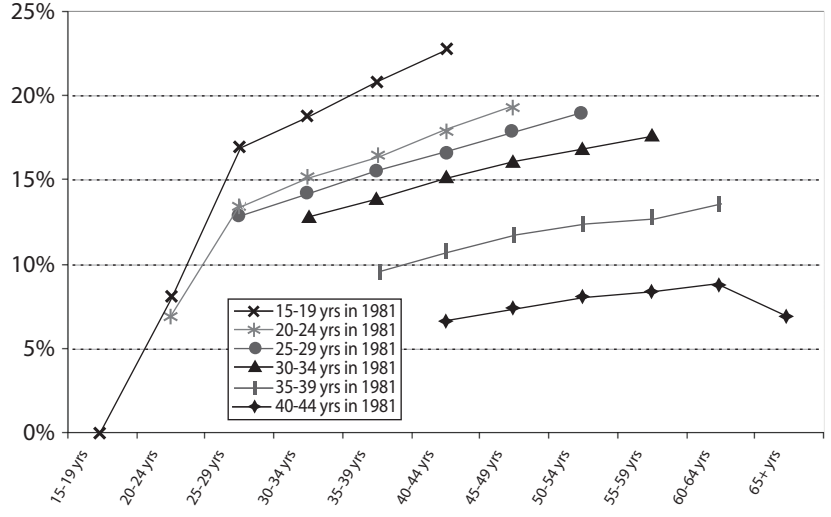


completion during this period for the other Canadian male and female populations by age cohorts respectively.

For the other Canadian male population, five of six cohort trend lines show progress in the completion of university degrees from 1981 to 2006, particularly for the two youngest cohorts of 15 to 19 and 20 to 24 years old. The other Canadian male cohort of 15 to 19 years experienced a large increase in their university degree completion in this time frame going from 0% in 1981 to 23% in 2006 when they are 40 to 44 years old. The slightly older other Canadian male cohorts of 20 to 24, 25 to 29 and 30 to 34 years old also made progress in increasing their university completions, going from 6% to 20%, 16% to 21% and 19% to 22% respectively. Smaller or marginal gains in the proportion of university degree completions were recorded for the older other Canadian male cohorts of 35 to 39 and 40 to 44 years old increasing from 18% to 20% and 14% to 14%, respectively, from 1981 to 2006.

Likewise for the other Canadian female population, all cohorts except the oldest (40–44 years) experienced gains in the proportions with a university degree over the twenty-five year period. Similar to their other Canadian male counterparts, the two youngest female cohorts of 15 to 19 and 20 to 24 years old underwent large increases in their university degree completion from 1981 to 2006, going from 0% to 23% and 7% to 19% respectively. The slightly older other Canadian female cohorts of 25 to 29, 30 to 34 and 35 to 39 years old also made progress in increasing their university completions going from 13% to 19%, 13% to 18% and 9% to 14% respectively. Only the 40 to 44 years old other Canadian female cohort showed no overall progress in this time frame, remaining at 7% in both 1981 and 2006. In comparison to their other Canadian male counterparts during this time period, the gains in university degree completions for female cohorts are lower,

Figure 5.17: Proportion of Other Canadian Females with a University Degree, Selected Cohorts in 1981 Aged to 2006



except for the two youngest of 15 to 19 and 20 to 24 years old which experienced similar gains to the male cohorts.

Figures 5.18 and **5.19** depict the trends in proportions of university degree completion from 1981 to 2006 for the Registered Indian male and female populations by age cohorts, respectively.

For Registered Indian males, the trend in progress in university degree completion from 1981 to 2006 is small for all age cohorts except those, older and including 35 to 39 years old. Similar to other 15 to 19 years old cohorts, the Registered Indian male cohort of 15 to 19 years showed a noticeable increase in the twenty-five year time period going from 0% in 1981 to 6% in 2006. However, this gain is nowhere near that of those experienced by their other Canadian 15 to 19-years-old counterparts. Some slight gains were experienced by slightly older Registered Indian male cohorts of 20 to 24, 25 to 29 and 30 to 34 years old increasing from 1% to 4%, 3% to 5% and 4% to 6% respectively. However, no gain in progress of university degree completion was experienced by the older Registered Indian cohorts of 35 to 39 and 40 to 44 years old.

It should be noted that decreases in the proportions with university degree completions occurred between the 1981 and 1986 Census periods for all Registered Indian male cohorts except for the two youngest. To date, there is no explanation to account for this decrease between these two Census years. However, it may be due to changes in the participation of First Nations reserves in the Census during different Census periods, as was mentioned previously, or the change in the Census question used to identify Registered Indians in 1981 and 1986 (see note 12).[15]

Figure 5.18: Proportion of Registered Indian Males with a University Degree, Selected Cohorts in 1981, Aged to 2006

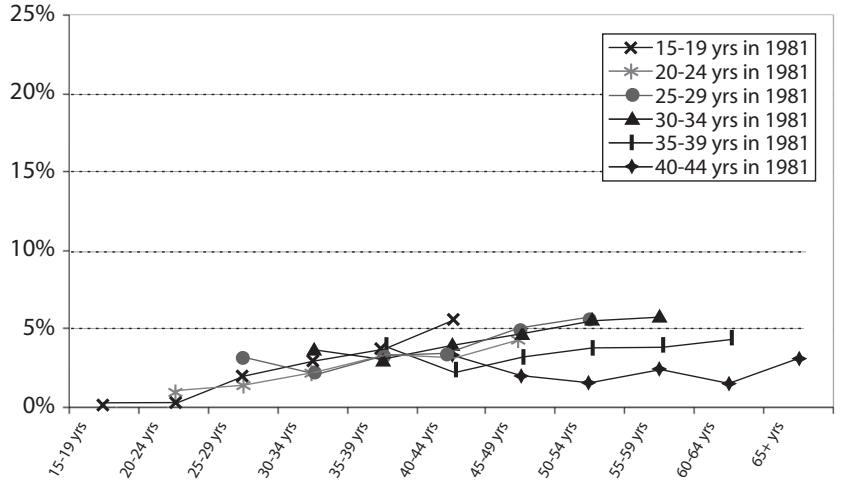
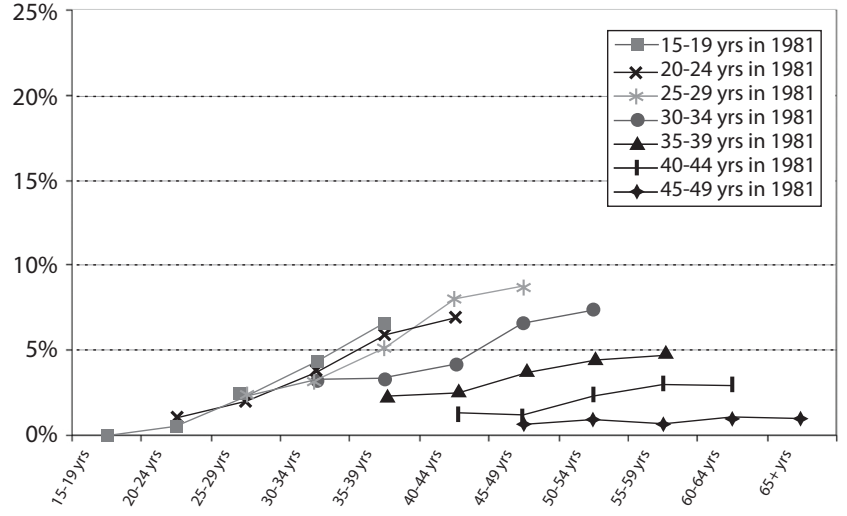


Figure 5.19: Proportion of Registered Indian Females with a University Degree by Age Category, Selected Cohorts in 1981, Aged to 2006



The trends in university degree completion for the six Registered Indian female cohorts from 1981 to 2006 was slightly better than their male counterparts. Similar to other 15 to 19 years old cohorts, the Registered Indian female cohort of 15 to 19 showed a noticeable increase in university degree completions, going from 0% in 1981 to 9% in 2006. This is a better result compared to the 15 to 19 years old Registered Indian male cohort. However, this increase is nowhere near the one experienced by their other Canadian 15 to 19 year old female counterparts.

Figure 5.20: Proportion of Registered Indians Residing On-reserve with a University Degree, Selected Cohorts in 1981, Aged to 2006

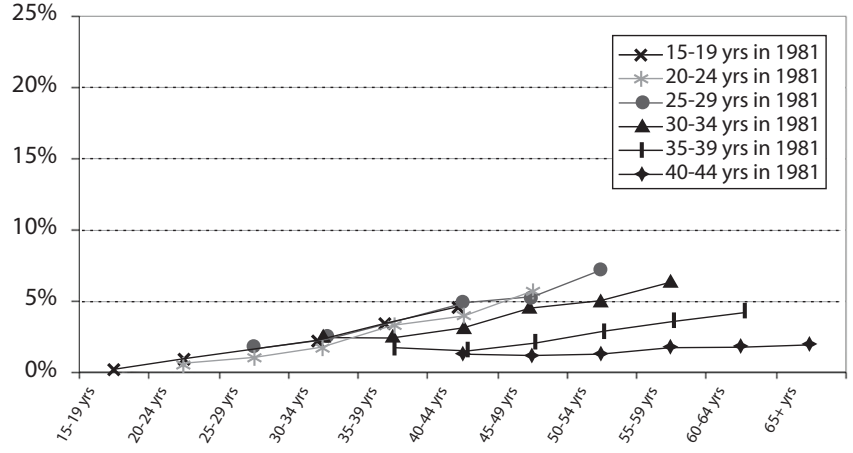
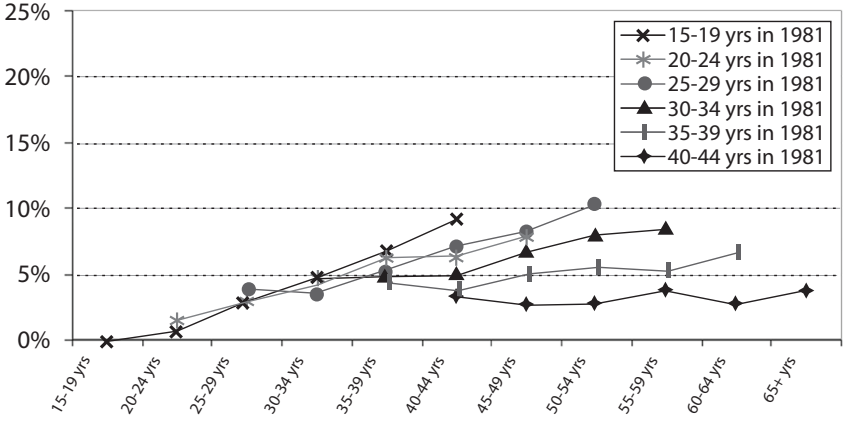


Figure 5.21: Proportion of Registered Indians Residing Off-reserves with a University Degree, Selected Cohorts in 1981, Aged to 2006



Noticeable gains in university completions were experienced by slightly older Registered Indian female cohorts of 20 to 24, 25 to 29, 30 to 34 and 35 to 39 years old increasing from 1% to 9%, 2% to 12%, 3% to 9% and 2% to 6% respectively. The older Registered Indian female cohort of 40 to 44 years old experienced a small gain in their completion of university degrees, going from 1% to 3%.

Figure 5.22: Proportion of Registered Indian Males Residing On-reserve with a University Degree, Selected Cohorts in 1981, Aged to 2006

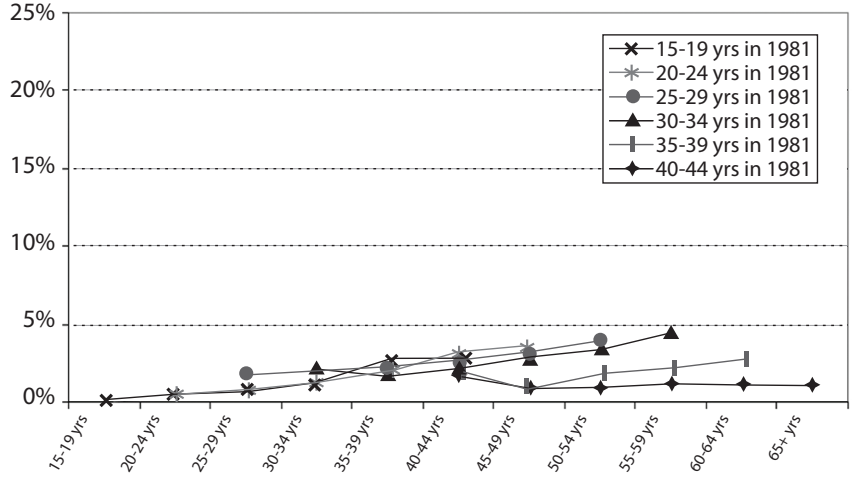
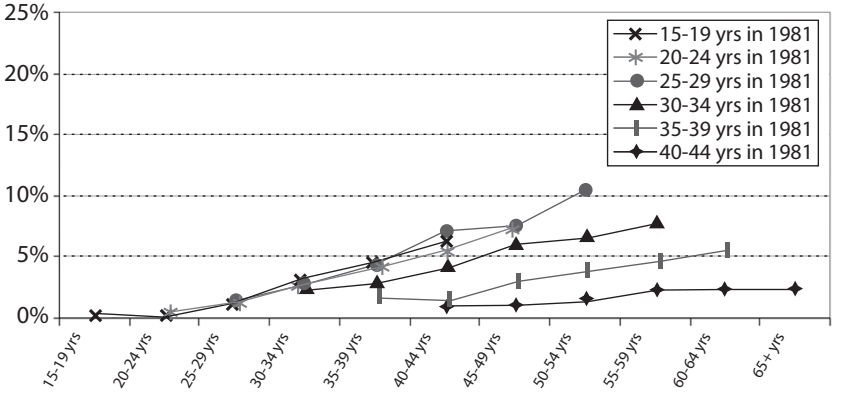


Figure 5.23: Proportion of Registered Indian Females Residing On-reserve with a University Degree, Selected Cohorts in 1981, Aged to 2006



Age Cohort Trends in University Attainment for Registered Indians Residing On- and Off-reserve from 1981 to 2006

The trends in university degree completion for six age cohorts beginning in 1981 to 2006 are depicted for the Registered Indian population residing on- and off-reserve in **Figures 5.20** and **5.21**.

For Registered Indians residing on-reserve, all six age cohorts experienced only slight gains in the proportion of university degree completions from 1981 to 2006. The four youngest on-reserve Registered Indian cohorts of 15 to 19, 20

to 24, 25 to 29 and 30 to 34 increased their university completions slightly from 1981 to 2006 going from 0% to 5%, 0% to 6%, 2% to 7%, and 2% to 6%, respectively. The two older on-reserve Registered Indian cohorts of 35 to 39 and 40 to 44 years old underwent only a slight improvement in this same time period from 2% to 4% and 1% to 2% respectively.

For Registered Indians residing off-reserve, the four youngest age cohorts experienced small but noticeable gains in their proportions of university completion from 1981 to 2006. Registered Indian cohorts of 15 to 19, 20 to 24, 25 to 29, and 30 to 34 residing off-reserve increased their university credentials going from 0% to 9%, 2% to 8%, 4% to 10%, and 5% to 9%, respectively, in the twenty-five year period. The older off-reserve Registered Indian cohorts of 35 to 39 (4% to 7%) and 40 to 44 (4% to 4%) years old experienced small or no changes in this same time period. Although the gains in university degree completions for the off-reserve Registered Indian cohorts are small, they are much more pronounced in magnitude than their counterparts residing on-reserve, particularly for the early adult aged cohorts in 1981.

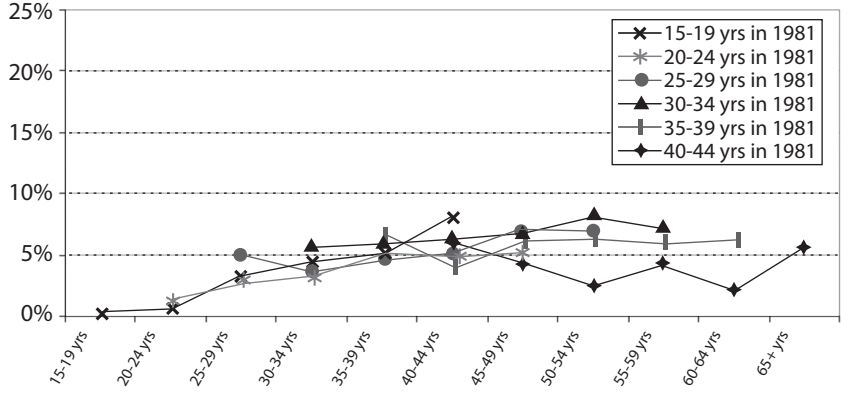
Age Cohort Trends in University Attainment for Registered Indians Residing On-reserve by Gender from 1981 to 2006

Trends in university degree completion for six age cohorts beginning in 1981 to 2006 are depicted for the Registered Indian population residing on-reserve by gender in **Figures 5.22** and **5.23**.

For Registered Indian male cohorts residing on-reserve, five out of six cohorts underwent only slight gains in their proportion of university degree completions from 1981 to 2006. Specifically, the on-reserve Registered Indian cohorts of 15 to 19, 20 to 24, 25 to 29, 30 to 34, and 35 to 39 years old slightly increased their proportions from 0% to 3%, 0% to 3%, 2% to 4%, 2% to 4%, and 2% to 3%, respectively. The on-reserve Registered Indian male cohort of 40 to 44 (2% to 1%) years old experienced a slight decrease in their already small proportion with a university degree between 1981 and 2006.

For Registered Indian female cohorts residing on-reserve, the situation is more promising compared to their on-reserve male counterparts. Of the six cohorts, five experienced noticeable gains in their proportions of university degree completions from 1981 to 2006, the exception being the oldest cohort. On-reserve Registered Indian female cohorts of 15 to 19, 20 to 24, 25 to 29 and 30 to 34 years old posted gains in university completions from 0% to 7%, 1% to 8%, 1% to 10%, and 2% to 8%, respectively, between 1981 and 2006. Older cohorts of 35 to 39, 40 to 44 (2% to 6%) and 45 to 49 (1% to 2%) years old experienced smaller gains over this same time period. These gains, although positive to see, are much smaller in magnitude than their other Canadian female cohort counterparts.

Figure 5.24: Proportion of Registered Indian Males Residing On-reserve with a University Degree, Selected Cohorts in 1981, Aged to 2006



Age Cohort Trends in University Attainment for Registered Indians Residing Off-reserve by Gender from 1981 to 2006

Trends in university degree completion for six age cohorts beginning in 1981 to 2006 are depicted for the Registered Indian population residing off-reserve by gender in **Figures 5.24** and **5.25**.

Of the Registered Indian male cohorts residing off-reserve, all except the oldest cohort experienced only slight gains in their proportions with a university degree from 1981 to 2006. These gains in university degree completions are slightly better than their on-reserve male cohort counterparts. Specifically, the off-reserve Registered Indian male cohorts of 15 to 19, 20 to 24, 25 to 29, and 30 to 34 years old increased their university completions from 0% to 8%, 1% to 5%, 5% to 7%, and 5% to 7% respectively between 1981 and 2006. The older off-reserve Registered Indian male cohorts of 35 to 39 (7% to 6%) and 40 to 44 (6% to 6%) years old experienced either decreases or no changes in their progress in completing university degrees in the twenty-five year period.

It should be noted that trends in university degree completion for certain cohorts for the off-reserve Registered Indian male population has varied over time. In particular, the cohorts of 25 to 29, 35 to 39 and 40 to 44 years old experienced decreases in their proportions with a university degree between 1981 and 1986 and sometimes to 1991. To date, there is very little empirical evidence that accounts for this negative trend during this time. However, one possible explanation may be that Registered Indians with university degrees may need to migrate to other areas in Canada to work in their field, thus being subject to local and Canada-wide labour market demands.

For Registered Indian female cohorts residing off-reserve, the situation is more promising compared to their off-reserve male counterparts. All cohorts, except

Figure 5.25: Proportion of Registered Indian Females Residing On-reserve with a University Degree, Selected Cohorts in 1981, Aged to 2006

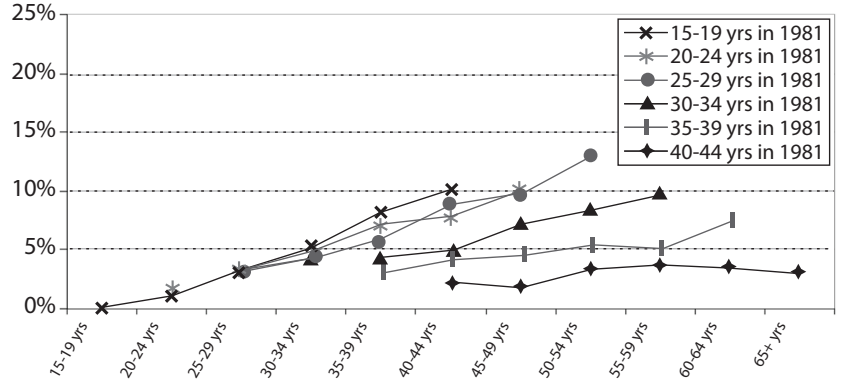


Table 5.2: Overall Proportion with a University Degree, Aged 15+

	1981	1986	1991	1996	2001	2006	Average census year over census year increase
Registered Indians	1.5%	1.32%	2.0%	3.0%	3.9%	5.1%	0.72%
Other Canadians	8.1%	9.6%	11.5%	13.4%	15.6%	18.4%	2.06%
Difference	-6.5%	-8.3%	-9.4%	-10.4%	-11.7%	-13.2%	(1981-2006)
(% Reg Ind - %Oth Can)							

Table 5.3: Overall Proportion with a University Degree, Aged 25–44

	1981	1986	1991	1996	2001	2006	Average census year over census year increase
Registered Indians	2.9%	2.53%	3.2%	4.3%	5.2%	6.8%	0.77%
Other Canadians	13.8%	15.20%	16.7%	18.6%	22.2%	27.1%	2.66%
Difference	-10.8%	-12.60%	-13.5%	-14.4%	-17.0%	-20.3%	(1981-2006)
(% Reg Ind - %Oth Can)							

for the oldest ones, experienced noticeable gains in their proportions of university degree completions from 1981 to 2006. In fact, off-reserve Registered Indian female cohorts exhibited the best progress of all the Registered Indian cohorts in university degree completion. The off-reserve Registered Indian female cohorts of 15 to 19, 20 to 24, 25 to 29, and 30 to 34 years old posted gains in university completions from 0% to 10%, 2% to 10%, 3% to 13%, and 4% to 10%, respectively, between 1981 and 2006. Older cohorts of 35 to 39 (3% to 7%) and 40 to 44

(2% to 3%) years old experienced smaller gains over this same time period. These gains, although positive to see, are much smaller in magnitude than their other Canadian female cohort counterparts.

The Gap in University Attainment between the Registered Indian and Other Canadian Populations

Albeit some progress has been made, it is apparent that the trends in the proportions of university degree completions in the Registered Indian population is much lower than that of other Canadians over the twenty-five year period from 1981 to 2006. Using the 2006 Census cross-sectional data, it is clear that all age groups in the other Canadian population have increased their proportions of university degree completion over that in 1981. In particular, young other Canadians are enrolling and completing their university degrees at much higher proportions and at an earlier age compared to the same age groups in earlier Census periods. Given this gap in university degree completions between the two populations, an additional question comes to mind: What is the magnitude of this gap, or differential, and how has it been changing over time?

Tables 5.2 and **5.3** show the proportions of university degree completions amongst the Registered Indian and other Canadian populations aged 15+ years and between 25 to 44 years in the six Census periods from 1981 to 2006.

In 1981, the difference in the proportion of university degree completion for those aged 15+ between the Registered Indians and other Canadians was -6.5%. In 2006, this gap had doubled to -13.2%. Although Registered Indians have slowly increased the number of individuals with a university degree between 1981 and 2006, the average Census-year-over-Census-year increase amounted to only 0.72%, compared to 2.06% for other Canadians. At this rate, the gap in the proportions with a university degree between the two populations is not expected to close anytime in the near future.[16]

As mentioned previously, the Highest Level of Schooling (HLOS) and the new 2006 Highest Degree, Certificate or Diploma (HDCD) census variables do not take into account the amount of time a respondent takes to complete their post-secondary or university studies. It could take four years or twenty years to complete their post-secondary studies and this makes no difference in how the HLOS/HDCD variable captures this information. However, this does affect completion rates for various post-secondary categories in which certain age groups will have better completion rates simply because they have had more time than younger ones to complete their studies. In particular, other researchers have documented this scenario for certain mid-range age groups, such as those aged 25 to 44 years. Consequently, this is of interest to examine in this analysis because previously it was shown that Registered Indians in this age range tended to have higher proportions with university degrees than their younger counterparts.

Figure 5.26: Proportion of Registered Indian and Other Canadian Populations Aged 15+, with a University Degree, 1981 to 2006

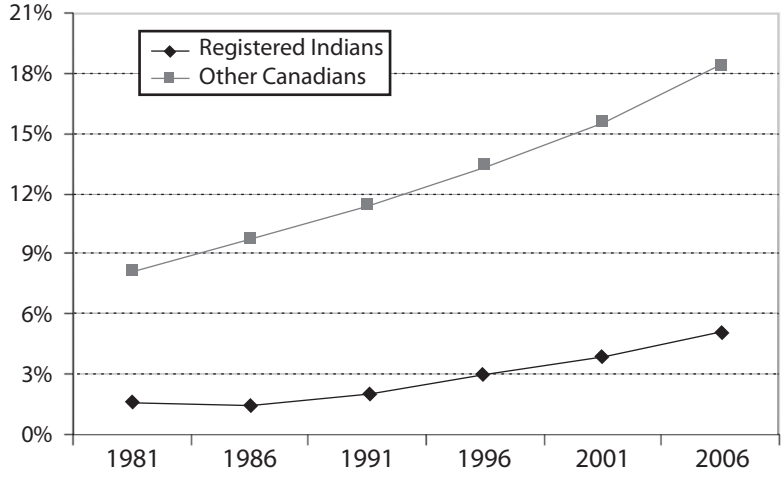


Figure 5.27: Proportion of Registered Indian and Other Canadian Population Aged 25–44 Years with a University Degree, 1981 to 2006

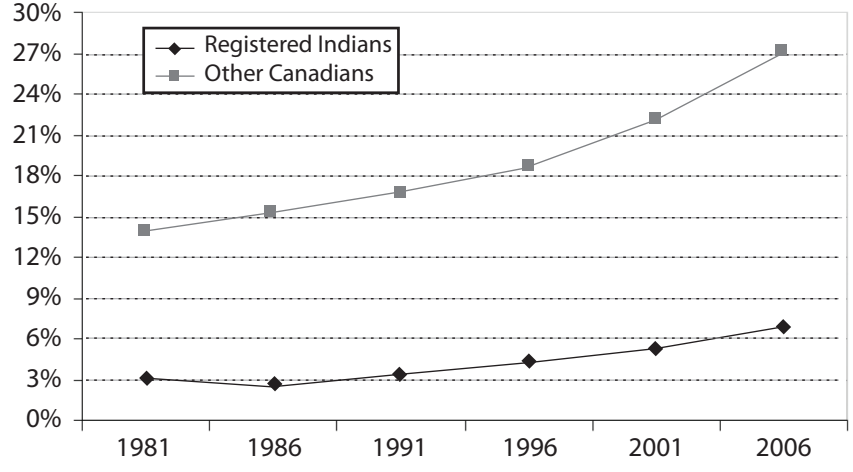


Table 5.3 focuses on the overall proportion of university degree completions amongst Registered Indians and other Canadians ages 25 to 44 from 1981 to 2006.

Unfortunately, even when we examine the proportions of university completions for the mid-range age group of 25 to 44 years old between Registered Indians and other Canadians, we see no improvement in the gap between the two populations compared to overall populations aged 15+ years. For this mid-range age group, we see a much wider gap.

More specifically, in 1981 the difference in the proportion of university degree completion for those aged 25 to 44 years between Registered Indians and other Canadians was -10.8%. In 2006, this gap had increased further to -20.3%. Both of these gaps in 1981 and 2006 are much larger for the 25 to 44 years old than for the total population aged 15+ years for Registered Indians and other Canadians. If we examine the average Census-year-over-Census-year increase in university degree completions for Registered Indians aged 25 to 44 years, it increased slightly to 0.77%, compared the same rate for the 15+ year Registered Indian population. For other Canadians aged 25 to 44 years old, their average Census-year-over-Census-year increase in proportions of university completions was 2.66%, much higher than that for the total other Canadian population age 15+ years old. Based on these rates, the gap in the proportions with a university degree between the two populations aged 25 to 44 years old is also not expected to close in the near future.

Figures 5.26 and **5.27** graphically depict the gaps or differential in the proportions of university degree completions amongst the Registered Indian and other Canadian populations from 1981 to 2006, as described above.

Five-year Trends in University Attainment for Registered Indians and the Other Canadian Population Using the Cohort Approach

In addition to looking at the cross-sectional trends of university degree completions by Registered Indian and other Canadian age groups from 1981 to 2006, we can also use the Census data to examine trends of similar cohorts in different Census periods followed over an equivalent time period. This would allow us to determine if similar cohorts, although separated by different Census periods, have improved their university attainment tracked over a similar amount of time. Unlike the previous cohort analysis, where we looked at the twenty-five year progress for six cohorts of 15 to 19 to 40 to 44 years old in 1981, the progress of all cohorts is examined except those older than 45 to 49 years old due to diminishing increases in university completions.

Tables 5.4 and **5.5** depict the change in university degree attainment by cohorts over a five-year time frame for the other Canadian and Registered Indian populations. The first column indicates the cohort in question, and the second column, the final age of the cohort after the five-year period. Since we have six periods of Census data, the following columns indicate the changes in attainment from one Census period to the next. This is simply the Census-year-over-Census-year difference between the university attainment proportions of the cohort in question.

In **Table 5.4**, for the other Canadian population, the younger cohorts of 15 to 19 and 20 to 24 years old have the highest average change in university attainment over a five-year period of 10.3% and 12.3%, respectively. Additionally, the 15 to 19 and 20 to 24 years old cohorts have been increasing their change in university attainment over consecutive Census periods, meaning that cohorts in more

Table 5.4: Change in University Degree Attainment Rate by Age Group and Time Period

Other Canadians							
		Change in Attainment per Time Period					
Initial Cohort	Final Cohort	1981–1986	1986–1991	1991–1996	1996–2001	2001–2006	Avg Change
15–19	**20–24**	7.4%	9.0%	11.1%	11.2%	13.0%	10.3%
20–24	**25–29**	7.3%	9.3%	12.8%	14.9%	17.1%	12.3%
25–29	**30–34**	1.5%	1.8%	1.8%	3.3%	4.3%	2.5%
30–34	**35–39**	1.0%	1.3%	1.2%	2.2%	2.8%	1.7%
35–39	**40–44**	0.7%	0.8%	0.9%	1.4%	2.0%	1.2%
40–44	**45–49**	0.6%	0.8%	0.8%	1.1%	1.5%	1.0%
45–49	**50–54**	0.4%	0.4%	0.4%	0.6%	1.1%	0.6%

Table 5.5: Change in University Degree Attainment Rate by Age Group and Time Period

Registered Indians							
		Change in Attainment per Time Period					
Initial Cohort	Final Cohort	1981–1986	1986–1991	1991–1996	1996–2001	2001–2006	Avg Change
15–19	**20–24**	0.6%	0.9%	1.3%	1.5%	1.9%	1.2%
20–24	**25–29**	0.8%	1.7%	2.2%	3.2%	3.8%	2.3%
25–29	**30–34**	0.0%	1.2%	1.5%	2.5%	4.5%	1.9%
30–34	**35–39**	-0.1%	1.5%	1.8%	1.6%	1.7%	1.3%
35–39	**40–44**	-0.6%	0.8%	1.8%	0.5%	2.0%	0.9%
40–44	**45–49**	-0.7%	1.0%	1.6%	0.9%	1.6%	0.9%
45–49	**50–54**	-0.3%	0.4%	0.8%	0.9%	2.0%	0.7%

recent Census periods are doing better than similar ones in later Census periods. Although the older cohorts (25–29 to 45–49 years old) have also increased their proportions of university degree completion, their average change in attainment per time period is much small than the two younger cohorts, ranging from 2.5% to 0.6%.

In **Table 5.5**, for the Registered Indian population, and unlike the other Canadian population, it is the slightly older cohorts of 20 to 24, 25 to 29 and 30 to 34 years old that have the highest average change in university degree completions over a five-year period of 2.3%, 1.9%, and 1.3% respectively. However, these average changes in university attainment are much lower than their other Canadian counterparts. Only the 15 to 19, 20 to 24, and 30 to 34 years old Registered Indian cohorts underwent a consistent increase in the change in university attainment over consecutive Census periods, indicating that more recent cohorts are doing slightly better than previous ones. Additionally, the 40 to 44 years old Registered Indian cohort underwent a similar average change to the other Canadian cohort. However, the proportion of university degree completions for the 40 to 44 years old other Canadian cohort is much higher than that for the Registered

Indian cohort. The average change only reflects those in this cohort who went on to complete their university degrees, thus adding to the overall proportion in the next Census year.

Summary and Concluding Remarks

We have presented a great deal of data in this chapter. We looked at male and female university completion on- and off-reserve and compared that to all other Canadians. We looked at these same comparisons for different age cohorts and even examined them over time.

To summarize, analysis of cross-sectional Census data from 1981 to 2006 show that even though the Registered Indian population has slightly increased their overall (15+ years) and age group specific proportions of individuals with university degrees, the other Canadian population has also done so but at much greater rates. By focusing on the progress of specific age groups for both populations, we find that higher proportions of university degree completions are found with older age groups for the Registered Indian population. This is contrary to the situation for other Canadians, where we find that younger age groups are increasing their proportions of university degree completions and exceeding the progress of similar age groups in earlier Censuses. Very little supportive research has been performed to adequately explain these different pathways to university (or other post-secondary education) between the Registered Indian and other Canadian populations. However, one possible hypothesis is that it is embedded in the different social and economic characteristics of the two populations. It is well-known that Registered Indians have much lower levels of high school diploma completions than other Canadians due to high dropout rates (White et al. 2002, Maxim and White 2006). Coupled with the fact that a high school diploma is usually a prerequisite to be considered for admission into a post-secondary program, other social and economic factors may work to delay the few that do go back to complete high school. This group that continues on to post-secondary studies does so at a later age than other Canadians.

Examining the cross-sectional data from 1981 to 2006 revealed some interesting trends in the proportions of university degree completions amongst the Registered Indian and other Canadian populations along gender dimensions. For female other Canadians, large gains in the proportions of university degree completions were experienced from 1981 to 2006. In fact, these gains significantly exceed those made by their male counterparts. In 2006, the female other Canadian 25 to 29 and 30 to 34 years old age groups have the highest levels of university completions. This female gender trend is somewhat paralleled in the Registered Indian population, albeit at lower rates of completion overall. Female Registered Indians have improved their proportions of university degree completions between 1981 and 2006, exceeding the progress of their male counterparts. However, it is the

older or mid-range female Registered Indian age groups that possess the highest proportions with a university degree.

For the Registered Indian population, university degree attainment patterns varied according to on- or off-reserve location. Generally, Registered Indians residing on-reserve had the lowest proportions with a university degree overall and by age groups. Even after twenty-five years, the increase in university degree completions for on-reserve Registered Indians was only slight. However, the scenario was brighter for off-reserve Registered Indian population, who had modest but noticeable gains in their proportions with a university degree from 1981 to 2006. These results support findings from other researchers who have noted that overall education outcomes for the on-reserve Registered Indian population are poorer than their off-reserve counterparts.

Examining the proportions of university degree completions for the on- and off-reserve Registered Indian population by gender revealed that male Registered Indians residing on-reserve underwent very little progress in university degree completions from 1981 to 2006. In fact, they showed the lowest progress of any population subgroup in this analysis. Little is known that would explain this lack of progress, but it clearly warrants further investigation to determine if any specific policy interventions should, or could be put in place to provide opportunities for on-reserve male Registered Indians to pursue and complete their university studies, if they choose to do so. Similar to the overall gender results, on-reserve female Registered Indians showed improvement in their proportions with a university degree from 1981 to 2006, which exceeded those of their male counterparts. For some age groups, the proportion of university degree completions for on-reserve females was over double that of their male counterparts. For the off-reserve Registered Indian population, males showed slight progress in university degree completions from 1981 to 2006. However, again their results were exceeded by off-reserve females who had the greatest gains in their proportions with a university degree from 1981 to 2006 for the Registered Indian population.

Using the cohort approach to analyzing progress in university attainment, the 15 to 19 years old cohort for the other Canadian population underwent a large gain in university degree completions from 1981 to 2006. In 2006 this group was 40 to 44 years old. This is to be expected, as they are starting essentially from zero because their age would have precluded finishing a degree. The mid-range age cohorts for the other Canadian population also experienced noticeable gains in their proportions of university degree completions. The older cohorts of 40 to 44 and 45 too 49 years old experienced marginal gains in university degree completions, but this was not unexpected, given they were over 65 by the 2006 Census. For Registered Indians, all cohorts except—for the two oldest—experienced gains in university attainment but on a much smaller scale than that of their other Canadian counterparts, particularly for younger cohorts. The cohort approach also confirmed some of the results gathered from the cross-sectional

analysis. In particular, Registered Indian female cohorts have been more successful in improving their university degree attainment over the twenty-five years than their male counterparts. In fact, the cohort approach confirms that this trend started sometime after 1981 and continued to 2006. The progress in university attainment for Registered Indian males is almost non-existent for those residing on-reserves. And finally, Registered Indian female cohorts residing off-reserve underwent the largest gains in university attainment from 1981 to 2006 of all Registered Indian cohorts tracked in this analysis.[17]

Upon quantifying the gap or differential in the progress of university degree completions between the Registered Indian and other Canadian populations from 1981 to 2006, it is established that the gap is wide and has increased substantially in this period, regardless of the gains made by Registered Indians. When we restrict this analysis to the population age group of 25 to 29 years old, who typically have higher post-secondary completion rates than younger age groups, we find that the situation is not better but slightly worse. If we hypothesize that even though the Registered Indian population may have more long-term success in going back to complete their university degrees at an older age than other Canadians, the numbers are not enough to close the gap, which in part has been fuelled by the success and earlier completions by younger other Canadians.

Using a cohort approach in examining the five-year trends of university degree completions for similar aged cohorts, but in different Censuses, we find that the two young other Canadian cohorts of 15 to 19 and 20 to 24 years old had the highest average change in proportions of university completions. For Registered Indians, slightly older cohorts of 20 to 24, 25 to 29, and 30 to 34 years old held this distinction but at much lower average rates than their other Canadian counterparts. Some progress has been noted in similarly aged young Registered Indian cohorts in the more recent Census. We see slightly better five-year improvement rates, which means more recent cohorts are doing slightly better than previous ones. But again, this progress is not enough to close or even maintain the gap with the progress experienced by their other Canadian counterparts.

This analysis has focused primary on university degree attainment. Increasing numbers of young Canadians are pursuing and completing their university studies to compete and maintain a competitive edge in the global market, with the expectation of an increased standard of living or well-being. However, there are other kinds of post-secondary education that are just as important in the work force. Not everyone will want or have the ability to pursue a university education pathway, including those in the other Canadian population. Findings from the 2006 Census have shown that Registered Indians and Aboriginal Canadians in general have had more success in completing college and trades programs. This has led to interesting policy options articulated by various organizations and governments which describe the young Aboriginal population as a potential and under-utilized human resource to fill shortages in the skilled labour force and the jobs being vacated by the aging baby-boomer generations who are quickly facing their retirement years.

Given the youthfulness of the Registered Indian population and of Aboriginal Canadians in general, ever increasing numbers will be of workforce age in the next decade and onward. While these populations must increase their levels of education and training in order to perform in these occupations, the growing rate of completion in college and trade programs offers promise in increasing Aboriginal and Registered Indian labour force participation. However, the same cannot be said for occupations requiring a university degree. Given the pace of attainment set by non-Aboriginal Canadians, Registered Indians and any others who are not able or willing to pursue this educational path are at risk of jeopardizing or stalling any progress made in their overall economic well-being.

Endnotes

1 Editor's note: Alternative arguments have been advanced that it is less the schools and curriculum that are to blame and more the social, economic, demographic, and geographic settings of the communities that are negatively influencing the outcomes. See the introduction of this book and the introduction to White, Beavon, and Spence (2008) *Aboriginal Well-being*.

2 The author wishes to be on record that other forms of post-secondary education are important and needed in the labour market; however, there is clear evidence that indicates that university education has a major positive impact on Aboriginal peoples in terms of income and related outcomes. See White et al., 2007.

3 Statistics Canada has recommended that only the university degree completion categories are comparable from the 2006 Census to previous Census periods. Any other comparisons are not recommended due to the total reformulation of the Census education questions that were implemented in the 2006 Census.

4 Editor's note: Strictly speaking the YITS only captured a sample of Aboriginal youth that were in the cities. It did not sample First Nation youth living in their communities or on-reserve. The YITS did have some 800+ Aboriginal respondents and their experience was assessed by an Aboriginal Policy Research Consortium study by Maxim and White (2006).

5 A reserve is a tract of land set apart for the use and benefit of an Indian or First Nation Band as defined by the *Indian Act*. Many First Nations now prefer the term 'First Nation community.' See <**www.ainc-inac.gc.ca/pr/pub/wf/trmrslt_e.asp?term=31**>.

6 Readers should take note that the "other Canadian" population is comprised of both Aboriginal and non-Aboriginal people in Canada. The common characteristic in this definition is that no one in the other Canadian population group is a Registered Indian under the *Indian Act* (1985).

7 Unfortunately, this is not the case for other Aboriginal groups such as the Métis and non-Status Indians, for reasons described later in this chapter.

8 This is a complex issue. An attempt was made to determine if reserves that did not take part in the 1996 Census of Canada were significantly different (outliers) to those that did participate. This was done by going back to previous Census data where the target reserves were enumerated. The analysis showed no significant patterns of differences between participants and non-participants for that particular Census. See Maxim and White, 2000.

9 Beginning with the 1996 Census and onward, it is possible to identify other Aboriginal populations using the Aboriginal identity questions (including those individuals who are Métis, Inuit and North American Indian or have multiple Aboriginal identities). However, a cohort approach to analyzing the educational progress for these groups over several Census periods is not encouraged for several reasons. First, there is a limited amount of Census periods for which this data would be available resulting in a very short trend. However, a second and more serious limitation exists. The growth rates for these groups as measured using Census data exceed what is theoretically possible and explainable using what is known about fertility and mortality (Guimond 2003). The phenomenon of "ethnic mobility" has been used to explain the extraordinary growth rates for these Aboriginal groups, in which one changes their ethnic affiliation over time, which in turn is reflected in the Census figures. Without any clear method to control for such changes in ethnic affiliations, no analysis by the Aboriginal groups affected by this phenomenon is presented in this discussion.

10 In the 2006 Census, the highest level of schooling variable is called the "Highest Degree, Certificate or Diploma" (HCDC) variable, which was known in previous Censuses as the "Highest Level of Schooling" (HLOS) variable.

11 Editor's note: Given that these are percentages/proportions, it could be that we see a pent-up demand releasing for women, since they had lower proportions before and now are active as partners in most occupational categories. This is most likely giving us a look at the effect of social change concerning women over the last quarter century.

12 The problems in educational attainment of Registered Indians residing on-reserve in comparison to counterparts off-reserve has been documented by other researchers such as White et al., 2002.

13 For the 1981 Census, Registered Indian status was collected through an ethnic-origin-based question. However in 1986, Registered Indian status was collected through an "Aboriginal identity"-based question. This data collection change, in conjunction with the incomplete enumeration of reserves during this time explains, the overall difference in Registered Indian population counts from the 1981 and 1986 Censuses.

14 These are not the only cohorts arising from the six cross-sectional Census periods. There are also five other 15-19 year old cohorts which arise in the 1986, 1991, 1996, 2001 and 2006 Census periods as well as the older cohorts of 45-50 to 65+ year olds in the 1981 Census. We do not track the younger cohorts after 1981 because they are not in existence for all five census periods. This results a period of tracking that is not the same as the 15-19 year olds in 1981. Secondly, given the oldest category is 65+, tracking of the older 1981 cohorts is meaningless. As well, changes in university attainment for this group is minimal.

15 Editor's note: These are not likely to provide a full explanation, given that Registered Indian women still showed improvement.

16 As a speculative exercise, if the other Canadian university degree proportion and the average Census-year-over-Census-year increase for Registered Indians remained at 2006 levels, it would take the Registered Indian population 92 years to close the university attainment gap.

17 Editor's note: The gains for females off-reserve may provide us with some understanding about what contributes to success. It raises the hope that there are potentials for real gains.

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